TellerScan® 215 & 230

Countertop Check Scanners

User Manual

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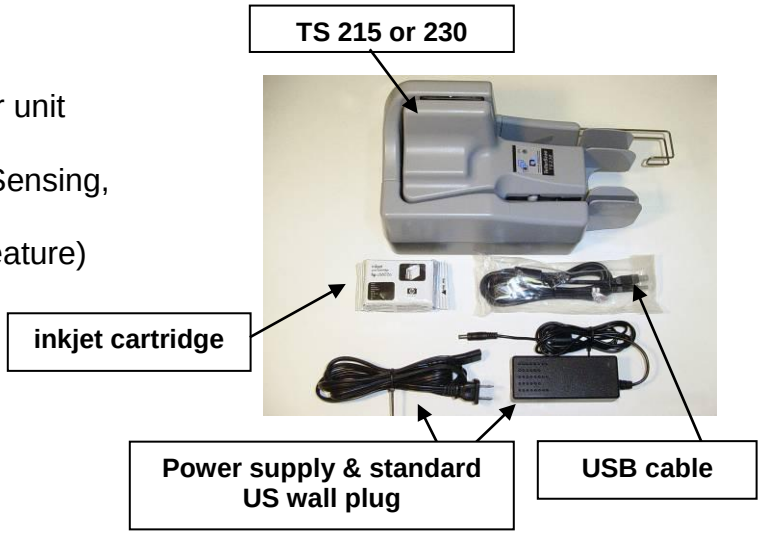
TellerScan 230 Equipment

TellerScan 215 & 230 Equipment Checklist

The TellerScan 215 & 230 package includes the following pieces:

- TellerScan 215 or 230 scanner unit
- USB 2.0 cable
- 100v-240v -50/60 hz Voltage Sensing, external power supply
- HP inkjet cartridge (Optional feature)



TellerScan 215 & 230 System Requirements

The following PC specifications are required to operate the TellerScan 215 or 230 with your scanning application software:

Recommended	Minimum
▪ 2.4 GHz Pentium IV class processor 2 GB RAM	▪ 1GHz Pentium III class processor 512 MB RAM
▪ 1.5 GB free disk space	▪ 1.5 GB free disk space
▪ Windows 2000, XP, Vista, Windows 7 (32 or 64 bit)	▪ Windows 2000, XP, Vista, Windows 7 (32 or 64 bit)
▪ USB 2.0 port	▪ USB 1.1 port

Radio Frequency Interference

The TellerScan 215 & 230 generates, uses, and can radiate radio frequency energy. If the unit is not installed and used properly that is, in strict accordance with the instructions in this manual it may cause harmful interference to radio communications. It has been tested and found to comply with the limits for Class digital devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against harmful interference when operated in a commercial environment.

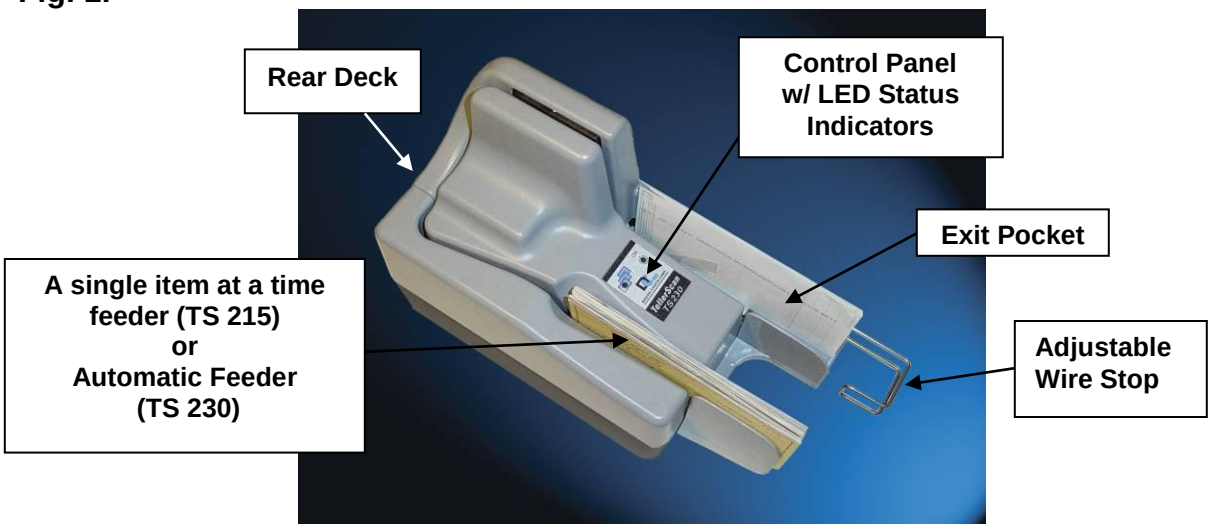
Operation of this equipment in a residential area is likely to cause interference, in which case, the user (at their own expense) will be required to take whatever measures may be required to correct the interference. The use of shielded cables is required when connecting this device to any/all peripheral or host devices. Failure to do so may violate FCC rules.

About the TellerScan 215 & 230

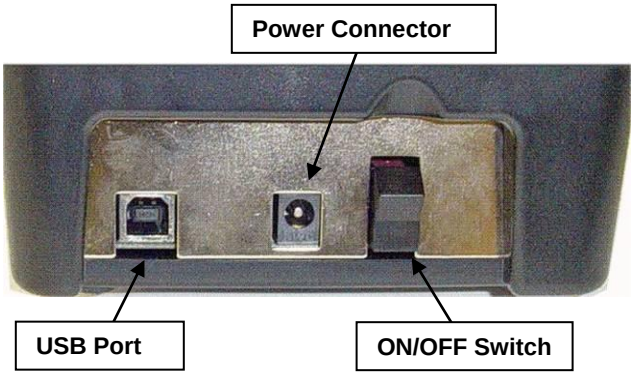
The TellerScan 215 & 230 Countertop Check Scanners are an easy-to-use, compact, scanner that connects to a personal computer (PC). The TellerScan 215 & 230 automatically scans the front and/or back of checks and also reads the MICR (Magnetic Ink Character Recognition) code line. The images and data are then transmitted through a Universal Serial Bus (USB) interface to the PC. The TS215 is a single check at a time feeder (drop and slide). The TS230 models have an auto feeder that handles up to 50 items.

Features of the TellerScan 215 & 230

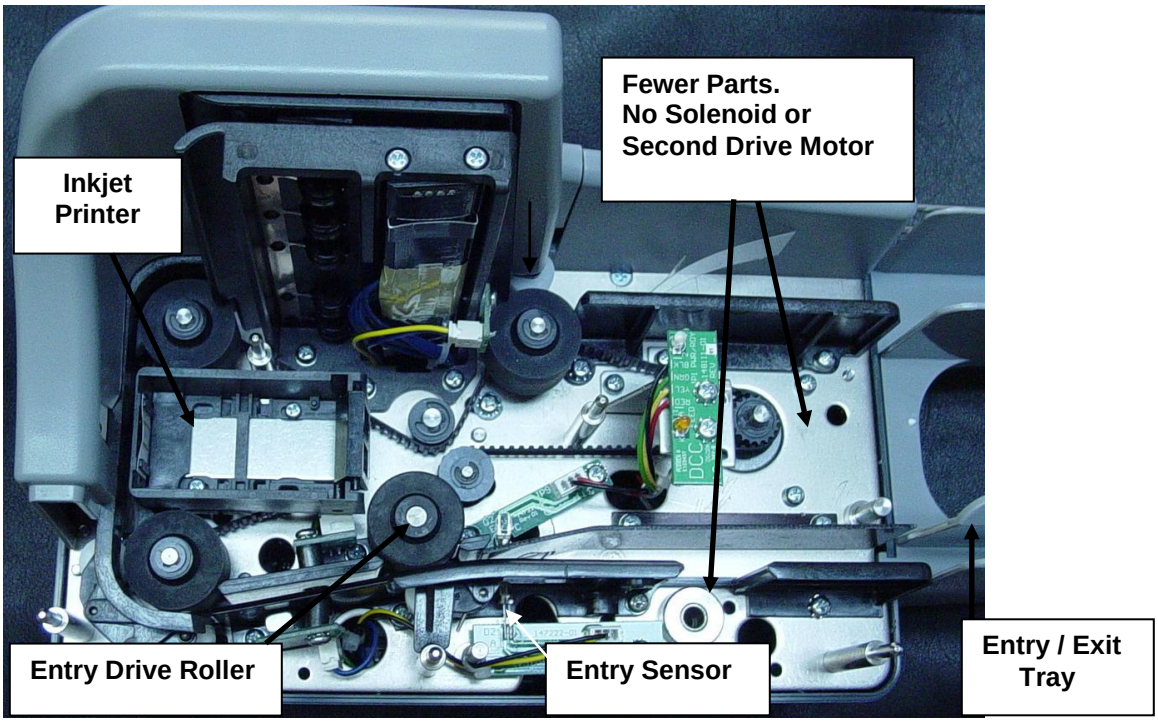
Outside the TellerScan 215 & 230
Fig. 1.



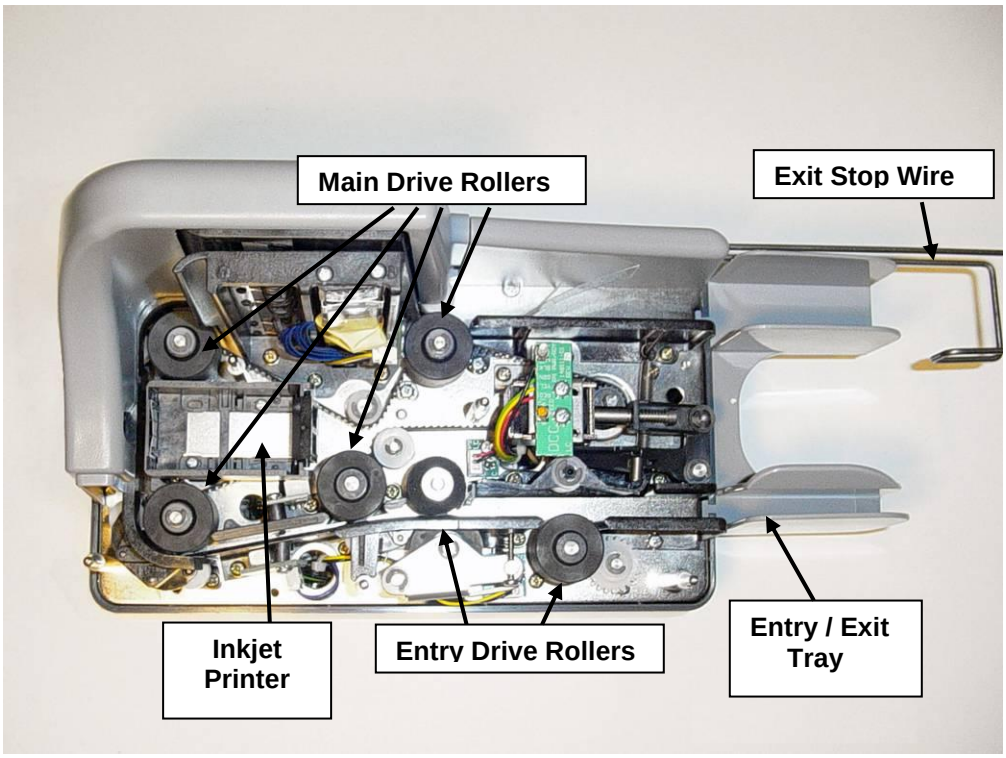
Rear Deck of TellerScan 215 / 230
Fig. 2



Inside the TellerScan 215
Fig. 3A



Inside the TellerScan 230
Fig. 3B



TellerScan 215 & 230 Installation

Un-Boxing the TellerScan 215 & 230

Step 1:

Remove inkjet cartridge from package slot

Step 2:

Pop-out package corners.

Step 3:

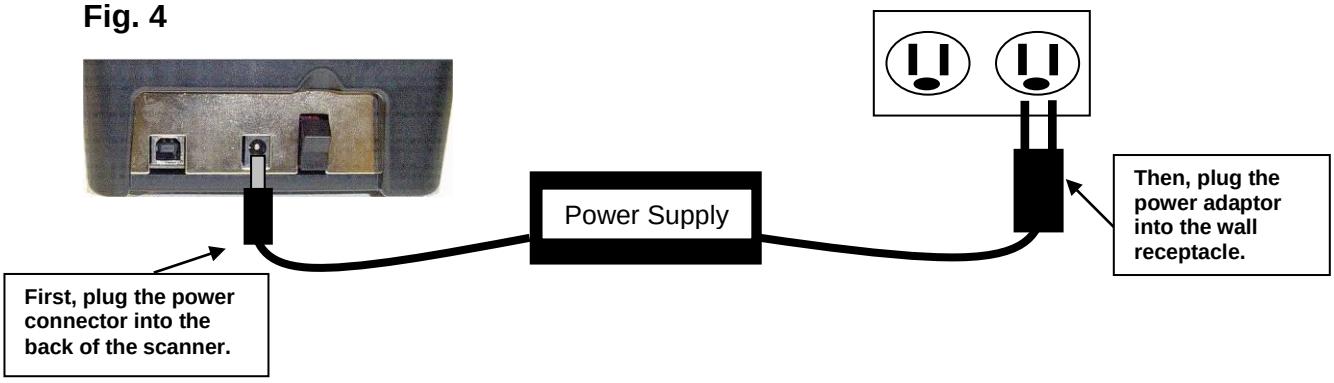
Do NOT open the protective bag. First remove the scanner from the box by lifting up on the bag.

WARNING: Before powering on the scanner, you will want to install the USB driver. See '**Installing the Driver Files'** section on page 8 for instructions.

Setting Up The Scanner

1. Place the unit on a flat surface near the PC and away from direct light.
2. Connect the power cord from the external power supply to the power connector on the scanner rear deck. (See fig. 2 and fig. 4)
3. Place the external power supply in a ventilated area several feet away from the scanner and connect to an appropriate source of power.
4. Make sure the TellerScan 215 or 230 is turned off. Verify that the red power indicator on the Control Panel is **not** lit. The power switch is on the rear deck. (See Fig. 2)
5. Connect the USB cable by plugging it into the port on the rear deck. Do not turn on the scanner until the driver has been loaded.

Fig. 4



Installing the Rear Endorser Inkjet Cartridge

Follow these instructions when installing the inkjet cartridge for the first time, or when replacing an empty cartridge:

1. Remove the center cover and locate the inkjet printer. (Fig. 5)

2. If replacing an existing cartridge, remove the inkjet cartridge by grasping the small tab at the rear end and gently pulling upward. Discard the used cartridge.

3. Obtain a new inkjet cartridge (HP part number C6602A). For new installations, one new cartridge is included with each inkjet model scanner. Be certain to read the instructions included with the cartridge.

4. Remove the protective tape covering the ink nozzles. Be careful not to touch the ink with your fingers or allow it to come in contact with any clothing.

5. Carefully, insert the nose (inkjet end) of the cartridge into the cradle (Fig. 6) in the scanner and slide forward while keeping the reservoir end of the cartridge tilted slightly upward.

6. Push the cartridge downward until it snaps into position, and then replace the top-center scanner cover.

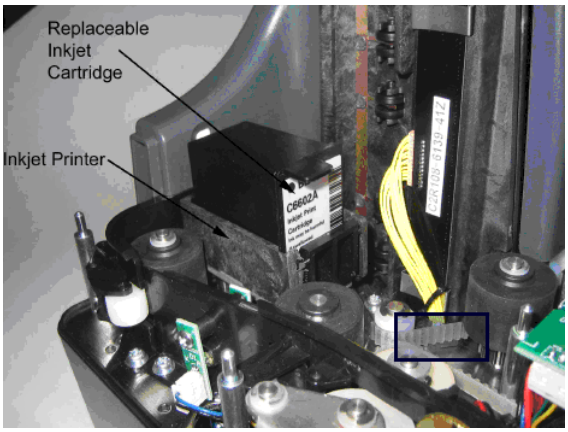


Fig. 5

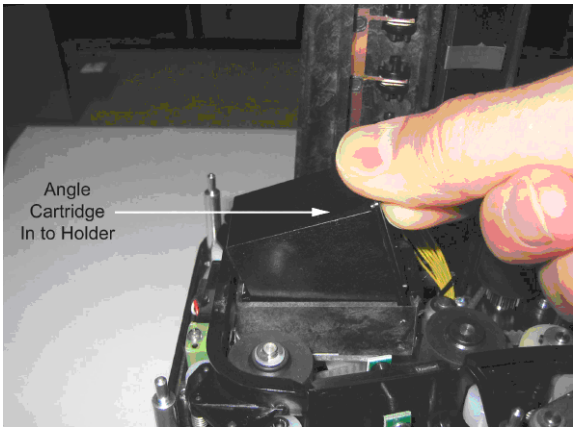


Fig. 6

Note: If the scanner has to be transported by common carrier from one place to another or extended periods of inactivity, it's advisable to remove the inkjet cartridge from the scanner and seal in an airtight bag. If the cartridge has not been used for an extended period of time, it may be necessary to clean the inkjet nozzles with a wet towel, and then blot dry.

Installing the Driver Files (Use this process if not included as part of the application installation or instructions from the reseller)

Windows 2000, XP & Vista - Drivers

1) Download the **TellerScan_USB_Vxx_Driver.zip** driver file from the web site. **http://www.digitalcheck.com/integration_support/drivers_and_demo_programs**
2) Unzip the file and run the driver utility program to automatically install the firmware and create a folder for the driver files (C:\Program Files\Tellerscan\Drivers).
3) Turn ON the unit. The right LED on the scanner control panel should now be showing 'red'.
4) Windows detects a new hardware device. For first time installations, you should not have to do anything. If the wizard will not finish, go to Device Manager and select to Update Driver for the USB device and point to the new folder and the TSUSB2.inf file. When running the utility a second time, select the 'Repair' option.
5) The USB controller will install as a TSDevice. The TS215 & 230 device will install as a Tellerscan, once acquired by the application.
6) The right LED will turn 'green' when the application launches and acquires the scanner.

NOTE: While the scanner will run on a USB 1.1 port, it is recommended that a USB 2.0 port be used to provide better overall performance. An INI file parameter may need to be increased to allow running on a USB 1.1 port due to the slower throughput. Check with your application provider.

Install the Demo Software Program (*Download from the Digital Check web site. Use the ScanLite program for testing the scanner and during the cleaning process*)

To download ScanLite Go to:

http://www.digitalcheck.com/integration_support/drivers_and_demo_programs/

The demo software is a basic scan program that allows you to operate the scanner, change different scanner settings, view images, and store them on your PC's hard disk. The demo program is not the software to run the system. Additional application software is required. Scanlite is an easier demo program to use and is recommended that it be used when cleaning the scanner.

NOTE: In most cases, your scanner will operate under the application provided by the solution provider that installed it. If you need to manually copy down the demo code:

1. Create a sub directory, i.e. "TS230" or "ScanLite" on the PC.
2. Copy the scanlite files into the directory.
3. Launch the scanlite.exe to open the demo application.

Getting Started with the TellerScan 215 & 230

How to Load Checks

TS215 – Checks are placed into the scanner one item at a time.

1. Place the item into the entry tray with the face of the document toward the outside.
2. Then slide the document into the path until the leading edge contacts the 1st roller.
3. If the application is set to scan, it will start the motor and grab the document.

TS230 – The automatic-feeder can hold up to 50 items. Use the following directions:

1. Remove all rubber bands, staples, paper clips, pins, etc.
2. Load the items into the automatic-feeder with the front of the items facing away from the scanner (Fig 8).

   NOTE: Checks must be jogged properly in order to feed correctly. The bottom and left leading edges of the check stack must align with one another (See Fig. 7).
3. Slide the items into the automatic-feeder until the left LED light illuminates (Fig. 10).
4. This indicates the scanner is ready to begin feeding the items. DO NOT force the items into the automatic-feeder after the light illuminates, as this may increase jam rates.

Fig. 7: bottom & left edges aligned

Fig. 8: Front of checks are facing out

LED Status Indicators

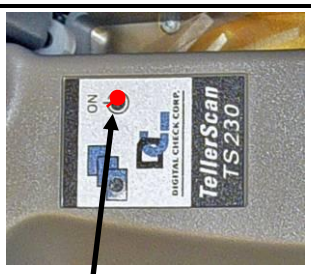


Fig. 9: The right LED comes on 'Red' to indicate power to the unit.

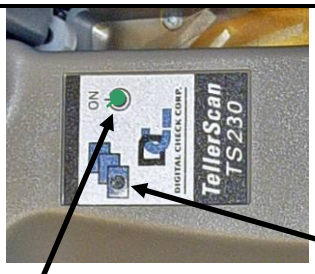


Fig. 10: When the scanner is acquired by the application, the right LED turns green.

The left LED is the document in pocket indicator after acquisition.

The standard sequence for the two top cover LEDs is:

1. When the scanner is powered on, the right LED will light up ‘red’. This indicates initial power to the scanner.
2. If the firmware and drivers have been properly loaded, once the application launches and acquires the scanner, the right LED will now turn ‘green’.
3. Once the TellerScan 230 is synchronized with the application, the left LED is now used to detect the presence of documents in the entry pocket.
4. Note: Both the power cable and both ends of the USB cable must be plugged in for the red LED light to come on. If the red LED does not come on, check the power and reseat both the power and the end of the USB cable going into the PC and into the scanner.

TellerScan 230 Troubleshooting

Clearing Jams

If a jam occurs, the paper path must be cleared. To do this, try to advance the jammed document by pressing the “EJECT” button within your application (if applicable). In case the document does not exit the document track, you can grab the document with both hands and carefully wiggle the document back and forth while lifting up. Otherwise, follow these steps:

1. Remove the central cover, if needed, to remove the document.
2. Clear the path of any jammed document and make sure that the rollers are free of paper and debris.
3. Replace the cover.

Document Feeding Problems

The TellerScan 215 is a drop and slide style of feeder. If the documents are not being grabbed by the first drive roller, try cleaning the entry rollers using a TellerScan cleaning card and the procedures described within this users guide.

The TellerScan TS230 might require an adjustment after 80,000 items. If you are experiencing piggybacks, turn the adjustment screw CCW 1/2 turn and retest. If you notice feeding problems, check the documents for bent of folded edges and for debris in the scanner document track. If feeding problems are still experienced, try cleaning the entry rollers using a TellerScan cleaning card and the procedures described within this users guide.

Check Images are streaking or fading

If you notice either streaking or fading on the images, the scanheads may require cleaning. Refer to the section on page 14 regarding cleaning the scanhead area.

TellerScan 230 Operator Maintenance

Cleaning the TellerScan 215 & 230

Over time, ink, dirt and dust particles will collect on the scanner rollers and document track. Therefore, it is necessary to clean these areas on a regular basis to assure reliable performance. Tips for performing preventative maintenance by the user on the TellerScan 215 or TS230 include:

- A Periodic inspection of the entire document track area. The use of flashlight will enhance the visual inspection between the scanheads and throughout the document track.

- Remove any staples, paper clips, and rubber bands that may have accumulated during use.

- Have a can of compressed air available to blow out the document track on a regular basis.

- Purchase the TellerScan cleaning cards to have on hand for regular cleaning maintenance. Run several scan cycles, flipping the card between cycles, while holding the card to 'scrub' the first drive or entry rollers. Once the entry rollers no longer deposit dirt onto the card, allow the card to scan through the entire path. Run this through several times while flipping the card end to end and top to bottom.

- Use the special cleaning swabs, which come with the TellerScan cleaning kit, to 'scrub' the four drive rollers under the center cover.

- Inspect the quality of the captured images on a regular basis. If the image quality drops off, inspect and clean the scanheads following the procedure described on page 13 & 14. If the quality does not appear to be related to dirt or debris, contact your service provider to determine if the scanheads can be recalibrated.

Cleaning your scanner's Rollers, Magnetic Head and Camera Faceplates

In severe environments where ink and dirt build up rapidly, it may be necessary to clean the scanner rollers, magnetic read head, scanhead faceplates, and document track every 3,000 to 5,000 documents. This simple maintenance will dramatically improve the reliability of your scanner over its useful life.

Scanner Cleaning Supplies (to order call 847.446.2285)

1. Compressed Air - (acquired for a local office supply provider)
2. Cleaning Kit – Consisting of one box of 25 cleaning cards & 6 Cleaning Swabs – (#130007-03)

Cleaning The TellerScan 215 & 230 using Scanlite Software

The Scanlite program, which is available from the Digital Check web site, is an excellent utility to run while performing the cleaning procedures recommended below. Scanlite provides an easy way to initiate the scan cycles in order to feed the cleaning cards properly through the scanner. Scanlite also includes an 'Eject' button which operates the scanner at half its normal speed, making it easy to scrub off the four main drive rollers when using the cleaning swabs.

Visit the following site to download Scanlite:
http://www.digitalcheck.com/integration_support/drivers_and_demo_programs

Cleaning Steps

Step	Action
1	Use compressed air to clean the document track as illustrated below:
2	You may need to remove the center or outer covers to check for other debris that may have entered the scanner. Using two hands pull straight up on the center and left side covers to remove. See the section below for removing the rear right cover.

Helpful Hints

1. Do not use stickers to cover up previously sprayed numbers on documents. The backing from the stickers can rub off onto the rollers and cause documents to jam.
2. Do not use White Out on scanned documents, the White Out can rub off the documents onto the scanner camera faceplate and distort the images.
3. Watch for loose debris falling into the scanner such as staples and rubber bands.
4. Carefully, turn the scanner upside down and shake it to remove any loose debris.

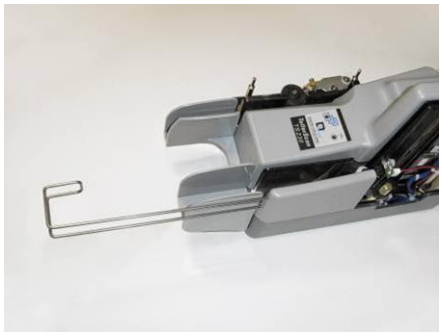
Cleaning Steps (continued)

Step	Action
3	Insert a new TellerScan® cleaning card in the entry pocket (single feed or auto-feeder)
4	Open the imaging application and initiate feeding while holding the card firmly to prevent the card from actually feeding through the scanner. You will want to cancel the transaction after running several scan cycles. **Note:** You may use the remote deposit application to run the scanner during the cleaning cycle, or the Scanlite demo program available from the Digital Check web site. **Important:** Run a scan cycle and hold onto the card, but allow it to move into the path so that the second set of rollers is scrubbing on the cleaning card. Flip the card over and run the same procedure again. This ensures that the main entry drive roller and the double feed rollers are being properly cleaned. **Tip:** Getting the rollers to scrub on the cleaning cards is the most important part of the cleaning procedure. Rollers with a severe build up of ink and dirt will require use of the swabs to be used to manually scrub all four of the main drive rollers.

Step	Action
5	Flip the card top to bottom and scan the card again, this time letting it move through the scanner into the exit pocket.
6	Turn the card around and repeat the same process of scanning the card several times on the reverse side. Result: The TellerScan cleaning card should have been run through the scanner three to four times, periodically flipping the card or swapping it end for end.
7	After completing the cleaning process, cancel the transaction and discard the used TellerScan card.

Cleaning Scan-Head Steps

Note: This is only performed when document images are unclear, distorted or have a dark line laterally through every image.

Step	Action
1	Pull out the wire document guide. 
2	Remove the left & right side covers. The covers lift off vertically.

Note: The swabs are typically used to clean off the four main drive rollers, but can also be used on the scanheads if you have a tough buildup on the glass.

Step	Action
3	Unscrew the nylon screw and gently open the scanner camera faceplates.
4	Use the cleaning swab or a clean cloth to wipe the camera faceplate (the two white strips and both sides of the camera faceplate section of the scanner).
5	Reassemble the scanner components by replacing the nylon screw, right and left cover and the wire document guide.

Common Error Codes From The Scanner

There are three common error codes that can typically show up depending upon the type of documents being scanned. There are no user available adjustments in the TS215 or TS230 scanners.

Periodic and scheduled cleanings should be performed before determining if any further problem determination is needed. See the scanner cleaning document.

Helpful Hints

1. Always hand-jog the documents to align the leading and bottom edges for the auto feed models. Visually check the leading edges for bent or curled or curled corners and straighten them as needed.

2. Place the stack of documents half way into the entry slot, then slide the stack forward until the Document In Pocket LED light comes on.

3. Be sure that the entry tray is fully seated and that the exit wire stop is extended enough to allow for approximately ½" more than the longest document..

216	Mis-Feed (The documents failed to leave the entry pocket on time).
	• Remove the documents and re-align the leading edges.
	• Check for bent or excessively curled leading edges and straighten as needed.
	• Verify that documents are not stuck together
	• Insert and rescan the documents. If they continue to get -216 errors, this might indicate that;
	  ○ The entry drive rollers may be dirty
	  ○ Something may also be lodged in the path

217	Double Document Feed (More than one document is detected & passed into the exit pocket) Check the exit pocket for a double document feed. (TS 230 only)
	• If the document is still in the path, grab the upper edges with both hands and wiggle the document back and forth, vertically to remove it.
	• If they continue to get -217 errors, this might indicate:
	  ○ The entry drive rollers may need to be cleaned
	  ○ Check the condition of the documents for bent edges
	  ○ Remove left side cover, turn adjustment screw ½ turn counter-clockwise and retest.

220	Document Stopped in the path (A document stopped in the path or was slow in exiting). • Eject the documents. To clear the error condition. • If the document will not eject, grab the upper edges with both hands and wiggle the document back and forth, vertically to remove it from the path. • Check the leading edges and corners of the document and straighten as needed. • A -220 error code where the document is stopping in the path repeatedly could indicate debris, paper or a staple in the path. Check if the document's leading edge looks OK or is catching on something. • All of the main drive rollers may need to be cleaned.

Additional Error Codes

Error	Action
212	No Checks (There are no checks indicated in the entry pocket) • A scan cycle has been initiated, but the Document In Pocket LED (the left LED) is not on indicating that no documents are present. • Restack the batch of documents and insert them back into the entry pocket. Slide them forward until the LED comes on. • This typically can happen when a scan cycle is initiated and the LED is not on.
553	No Print Head (The ink jet cartridge is not being sensed by the scanner) • When endorsing characters using the ink jet option, the print string is the first function sent down to the scanner at the start of a scan cycle. This error will come up immediately if no cartridge is present. • Open the center cover by lifting vertically. Remove and reseat the ink jet cartridge, being sure it snaps into place. • If that fails, try using a new cartridge.
125	No Scanner (The scanner was not found during the application to scanner initialization) • The right LED must be on and 'Red' for the application to acquire the unit. • Check the USB cable connections or try a different cable. • Try a different USB port. • Verify that the PC has the proper drivers and the scanner firmware file is installed.

Additional Scanner Information

There are other helpful documents available in PDF format on the Digital Check web site. Go to http://www.digitalcheck.com

The ink jet cartridge used in the TS215 & 230 is the standard HP C6602A cartridge which is available at most office supply stores. Typical yield is from 5 to 7 million characters.

The TS215 & 230 scanner can run on a USB 1.1 port, but it is recommended to use a USB 2.0 port for optimum performance and application timing.

For support, contact your dealer or Digital Check Corporation at 847-446-2285. The Service request form to send scanners into the plant for repair can be filled out on-line by going to the web site at: HTTPs:www.digitalcheck.com/clientarea and following instructions on the screen.

Periodic and scheduled cleanings should be performed before determining if any further problem determination is needed. See the scanner cleaning section.

Frequently Asked Questions

How many checks per minute should my TS215 & TS230 scan?
The TS215 can scan up to 30 DPM. Application delay may slow this down.
The TS230 has a rated throughput speed of up to 35, 65 or 100 documents per minute DPM depending on the specific model (TS230-35, TS230-65, TS230-100). Actual throughput will vary depending on the PC configuration, physical size of the items scanned, simple or complex endorsement and the speed of the application. Under a USB 2.0 interface, the expected speed range is 30 to 90 DPM. If speeds in the 15 to 20 DPM range are experienced, please check to be sure the scanner is not connected to a slower USB 1.1 port.

What is the proper sequence of the LED lights when the scanner is powered on?
The proper LED sequence is for the right LED to come on 'Red', followed by the right LED turning 'green' once the application has been launched. If the right LED does not come on 'Red', check the power and USB cable connections. If the LED is 'Red', but will not turn 'Green', contact customer support for assistance with checking firmware and reloading the drivers.

What is a safe distance to keep the power supply from the TS215 or TS230 check scanner to prevent electromagnetic interference with the MICR read head in the scanner?
Keep power supplies and other electromagnetic devices 12-18 inches away from the scanner to keep them from interfering with the Magnetic read head.

How often should the TS215 or TS230 check scanner be cleaned?
The recommended cleaning cycle is every 3,000 to 5,000 items in severe environments where ink and dirt may build up quickly. Please reference the cleaning instructions section for specific instructions on how to properly clean the TS215 and TS230.

How many characters does the HP C6602A inkjet cartridge yield?
Once opened, the practical life of the inkjet cartridge is six months. However, the rated character yield on the inkjet cartridge is between 5-7 million characters. Do not shake or drop to cartridge which can cause the printing to fail. Keep a spare cartridge on hand in case the current cartridge cannot be used.

What are the minimum and maximum document dimensions for the TS230?

	Minimum	Maximum
Document Height:	2.12"(54 mm)	4.17" (106mm)
Document Length:	3.19" (80mm)	8.97" (228mm)
Document Weight:	16 lb (60gr/sqm)	32 lb (120gr/sqm)

TellerScan 230 Specifications

Paper Size	H. min. 2.12” – max. 4.17” (54-106 mm.) L. min. 3.19” – max 8.97” (80-228 mm.)
Scanning Method	Concurrent two-sided Duplex Image Creation: 2 x 850 cell, 108mm CIS Light Source: Tricolor LED
Transport Speed	50 cm/sec
Image resolution	Up to 200 dpi
Image Format	B/W, 16 or 256 gray levels, 24 bit color
MICR Recognition	MICR recognition firmware for E13B or CMC7 standards
Diagnostics	On-Board Diagnostics: Tests the functionality of the scanner
Power-On Self Test	Automatic self-testing when switching on the unit
Software Tools	API Toolkit 32 bit
Options	Ink jet printer (Rear endorse), Uses HP C6602A cartridge
Part #130007-03	TellerScan Cleaning Kit (25 cards + 6 Swabs)
Electrical	Consumption: 1.5A Voltage: 100 to 240 VAC, 50/60 Hz, auto sensing power supply
Product life	Designed for useful life of 1,000,000 items (TS215) & 2,000,000 items (TS230)
MTTR:	15 minutes
Temperature Ratings:	Operating: 60°- 90° F Storage: 0° - 40° C
Humidity:	Operating: 35-85% (non condensing)
Dimensions	H 17 cm – L 21.7 cm (27.9cm incl. I/O trays) – D 13 cm (6.6” x 8.6” x 5.1”)
Weight	4.4 lbs (2 kg)
Certifications	UL – FCC – CE

Specifications subject to change

Trademarks and registered trademarks are property of their respective owners

Corporate Headquarters:
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Northbrook, IL 60062
Tel: 847/446-2285
Fax: 847/441-5507
Website: www.digitalcheck.com